

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CA2004/001698

## A. CLASSIFICATION OF SUBJECT MATTER

According to International Patent Classification (IPC) or to both national classification and IPC  
IPC 7: A61K 38/27; A61K 47/30; A61P 5/06

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
IPC 7: A61K 38/27; A61K 47/30; A61P 5/06

Electronic data base consulted during the international search (name of data base, and, where practicable, search terms used)  
Canadian Patent Database; Delphion; Genbank; keywords: growth hormone; somatotropin; ethylene; glycol; PEG; polyethylene glycol; polyol; sugar; stability; storage; aqueous; formulation

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US6011011 PHARMACIA & UPJOHN COMPANY, Hageman MJ, 4 January 2000 Whole document	1, 2, 4-6 and 8-12
Y	CA2378949 GRANDIS BIOTECH GMBH, Siebold B. et al, 18 January 2001 Whole document	1, 2, 4-6 and 8-12
Y	KATAKAM M, et al. "Use of Poloxamer Polymers to Stabilize Recombinant Human Growth Hormone Against various Processing Stresses", PHARMACEUTICAL DEVELOPMENT AND TECHNOLOGY, May 1997 vol. 2(2), pages 143-149; Whole document	1, 2, 4-6 and 8-12

Further documents are listed in the continuation of Box C.

Patent family members are listed in annex.

Special categories of cited documents :	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international-type search  
07 January 2005 (07-01-2005)

Date of mailing of the international-type search report  
24 February 2005 (24-02-2005)

Name and mailing address of the ISA/CA  
Commissioner of Patents  
Canadian Patent Office - PCT  
Ottawa/Gatineau K1A 0C9  
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## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons :

1.  Claims Nos. :  
because they relate to subject matter not required to be searched by this Authority; namely:  
  
Remarks: Because of the inclusion of an injection step in claims 13-14 these claims are considered to be directed towards methods of medical treatment of a human or animal patient which the authority is not required to search under Rule 39.1(iv) of the PCT. The search has therefore been established based on the use of the formulations .
2.  Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically :
3.  Claims Nos. :  
because they are dependant claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observation where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows :

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos. :
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos. :

### Remark on Protest

The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.  
PCT/CA2004/001698

Patent Document Cited in Search Report	Publication Date	Patent Family Member(s)	Publication Date
US6011011	04-01-2000	AT156361T T AU5018693 A DE69312947D D1 DE69312947T T2 DK661989T T3 EP0661989 A1 ES2107051T T3 GR3024632T T3 JP8501305T T JP2004285079 A MX9305729 A1 WO9406452 A1	15-08-1997 12-04-1994 11-09-1997 08-01-1998 02-03-1998 12-07-1995 16-11-1997 31-12-1997 13-02-1996 14-10-2004 31-03-1994 31-03-1994
CA2378949	18-01-2001	AU775107 B2 AU5997500 A BR0013162 A CN1360506T T CZ20020060 A3 EP1194170 A1 GB9916252D D0 GB9918902D D0 HU0202189 A2 IL147253D D0 JP2003504346T T NO20020151 A NZ516507 A PL353238 A1 SK252002 A3 TR200200034T T2 WO0103741 A1 ZA200200176 A	15-07-2004 30-01-2001 28-05-2002 24-07-2002 17-04-2002 10-04-2002 15-09-1999 13-10-1999 28-10-2002 14-08-2002 04-02-2003 12-03-2002 27-02-2004 03-11-2003 04-06-2002 21-05-2002 18-01-2001 09-06-2003